

## **Unveiling The Drivers of Bangladesh's Economic Boom and Lessons for Developing Nations**

Rayyan Aamir Ahmad

In Partnership with Polygence Research & Mentorship Organization

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### **ABSTRACT**

*Bangladesh's meteoric economic rise questions some conventional understandings of economic development. This study delves into the factors propelling this growth, uncovering a surprising narrative. Using World Bank data, I analyze the correlation between various economic indicators and GDP growth. While education is often touted as a panacea, my analysis reveals that manufacturing, agriculture, and remittances emerged as the true drivers of Bangladesh's prosperity. This research slightly deviates from conventional wisdom, suggesting that a manufacturing-led, remittance-fueled strategy, coupled with a pragmatic approach to education, may be a more effective pathway to development for many developing nations. By challenging established norms, this study offers a fresh perspective on economic growth and presents a roadmap for policymakers seeking to replicate Bangladesh's success.*

**Keywords:** Bangladesh, Economic growth, Education, Manufacturing, Developing nations

### **1. Introduction**

The world economy is increasingly interconnected. A growing economy in one country can create a ripple effect, impacting the lives of those across borders. Similarly, the decline of an economy can hurt others and can lead to global recessions, such as that in 2008. The actions, policies, and growth of one country have far-reaching consequences for the rest of the world. It is therefore important to understand the factors that contribute to economic growth among developing countries.

Bangladesh's rapid economic growth offers valuable lessons for other developing nations. By understanding the factors that contributed to its success, other countries can identify replicable strategies and evade pitfalls. In an interconnected world, growth for all countries is not merely a moral imperative, but it is a crucial step towards a more prosperous, peaceful, and sustainable

future for all.

This paper analyzes data from the World Bank's World Development Indicators database, a premier collection of internationally comparable statistics on global development. The World Bank is an international financial institution that seeks capital undertakings in nations across the world to "end extreme poverty and boost shared prosperity" ([World Bank](#)).

This research examines the determinants of economic growth in Bangladesh. I find that factors such as manufacturing, agriculture, and personal remittances matter most for economic growth and are the primary reason for Bangladesh's success. Other factors like education, net exports, investment, and foreign direct investment may have had some role in the nation's growth but are not likely the driving factors for Bangladesh's recent economic prosperity.

## **2. Data and Methodology**

I analyzed data from the World Bank using the World Development Indicators database. I investigated a host of variables ranging from education spending to exports and imports and all other variables linked with the most important variable of them all, GDP growth as a percentage. To study the effect of education spending on GDP growth, I used the ratio of government expenditure on education to total government spending. To create Figure 2, annual data on government expenditure on education as a percentage of GDP and GDP growth were collected from 2003 to 2022. These data points were then averaged over the entire period to produce the figure. I also investigated the relationship between manufacturing value-added and GDP growth.<sup>1</sup> To further evaluate the role of education on GDP, I used the adult literacy rate, expressed as a percentage, to measure those 15 years and above who can read, write, and understand a simple statement about their life. To analyze how foreign investment fuels economic growth, I explored the ratio of foreign direct investment, money from outside a country that goes into businesses there, to Bangladesh's GDP. To analyze the effect of agriculture on GDP, I used the crop production index, a single number reflecting yearly food crop output compared to a 2014-2016 baseline (excluding animal feed). Next, I studied exports, everything a country sells abroad, and imports, everything a country buys, and compared them to GDP growth to determine any possible correlation. I also studied how consumption impacts GDP with two factors: first, personal remittances, money sent home by foreign workers and gifts between individuals in different countries; and second, Households and NPISHs Final consumption expenditure, goods and services including durable goods purchased by households. I analyzed the effect investment has on economic growth with the use of Domestic Credit to the private sector, the total amount of loans and credit provided by banks and other financial institutions to businesses and

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<sup>1</sup> Value-added is defined as manufacturing output minus manufacturing inputs/ the value of goods produced minus the costs of producing them

individuals within a country.

The eight comparison countries listed below were specifically chosen to compare economic growth between the countries. Middle-income countries such as Pakistan, Egypt, Indonesia, Turkiye, Thailand, Vietnam, and Bangladesh all compare with each other as well as Malaysia which is considered to be on the cusp of reaching the title of high-income country. Additionally, all these countries are located in developing regions – South Asia, Southeast Asia, and the Middle East. This provides a common ground for economic factors like trade patterns and foreign investment trends. These countries are also considered emerging markets and have huge room for growth and expansion but some still face similar obstacles such as income inequality and institutional weaknesses. A comparison with this set of countries for Bangladesh showcases how quickly it is catching up. Looking at regional leaders such as Indonesia and Malaysia and competitive exporters such as Vietnam and Thailand, Bangladesh's recent growth shows its increase in competitiveness and emphasizes the rapid progress it has made. With this in mind, I decided to look at many key variables that go into economic growth or decline in a country and tested them out in the hope of finding the main contributors to Bangladesh's success. I then tested these variables against GDP growth as a percentage to determine how impactful the said variable has been on economic growth. The two main charts I made are scatter plots, which compare the eight different countries to each other, and a time series plot which showcases the success of certain policies and actions for Bangladesh over some time.

One major shortcoming of using this set of countries could be that they all may be growing slowly, which would only make it seem that Bangladesh's economy is accelerating rapidly whereas, in reality, it may not. Another factor that could be playing a large role that I have not been able to consider could be political instability. Countries experiencing political turmoil may divert resources away from productive economic activities towards security and stability, hindering growth potential.

Further research and greater access to sources might produce more robust data on the quality of education. This could entail average test scores by country, employment percentages, and more which specifically measure the quality of education and not simply how much is being spent on education. However, for this paper, the best substitute was to compare education spending and literacy rate to GDP growth.

### **3. Results**

My findings reveal a compelling pattern in which manufacturing, agriculture, and personal remittances emerge as the most statistically significant contributors to GDP expansion. These factors are likely the key drivers propelling Bangladesh's recent economic prosperity. While the

influence of education, net exports, investment, and foreign direct investment is recognized, the data suggests that they may play a less prominent role compared to the aforementioned trio.

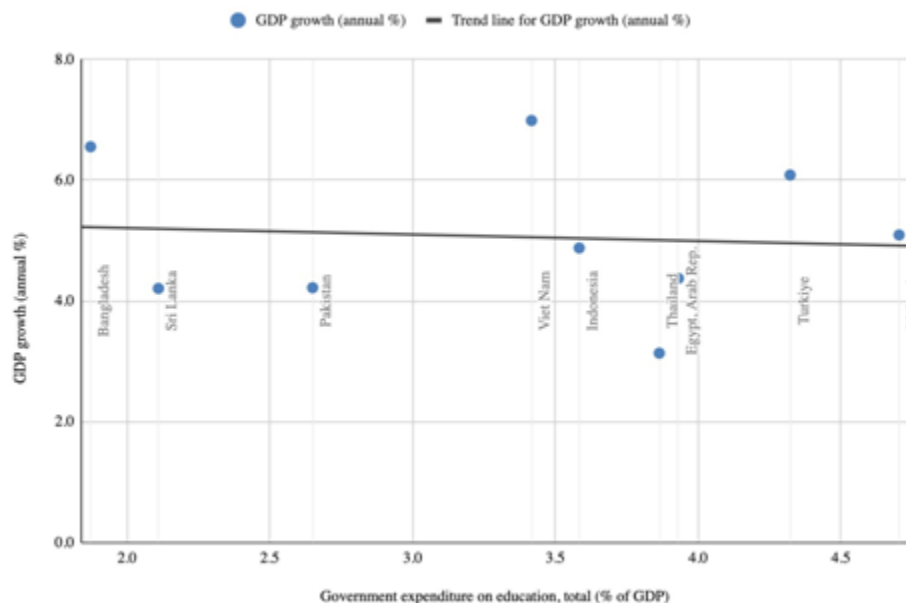
### 3.1. Education

Education expenditure is not the leading factor contributing to GDP growth. Figure 1 plots the relationship between expenditure on education and GDP growth among the selected sample of countries. We see there is no strong relationship. Contrary to common economic theory, I find no correlation between education spending and GDP growth. For example, Bangladesh had the lowest government expenditure on education but had the second-highest GDP growth in 2015.

Thailand also seems anomalous as it has a higher Government expenditure on education than most countries but has the lowest GDP growth. This suggests that many other factors go into GDP growth and education spending is one of them but may not be the leading factor. Economist Richard Easterlin argues in his paper “Why isn’t the whole world developed?” that there may be additional factors besides spending like attendance. Government expenditure may not match the number of people who attend formal schooling and therefore could explain the lack of a clear relationship between spending and growth. The author argues that formal schooling is essential for sustained economic growth because it creates a population that is more receptive to new knowledge and technologies (Easterlin 1981).

**Figure 1: Education Spending and GDP Growth**

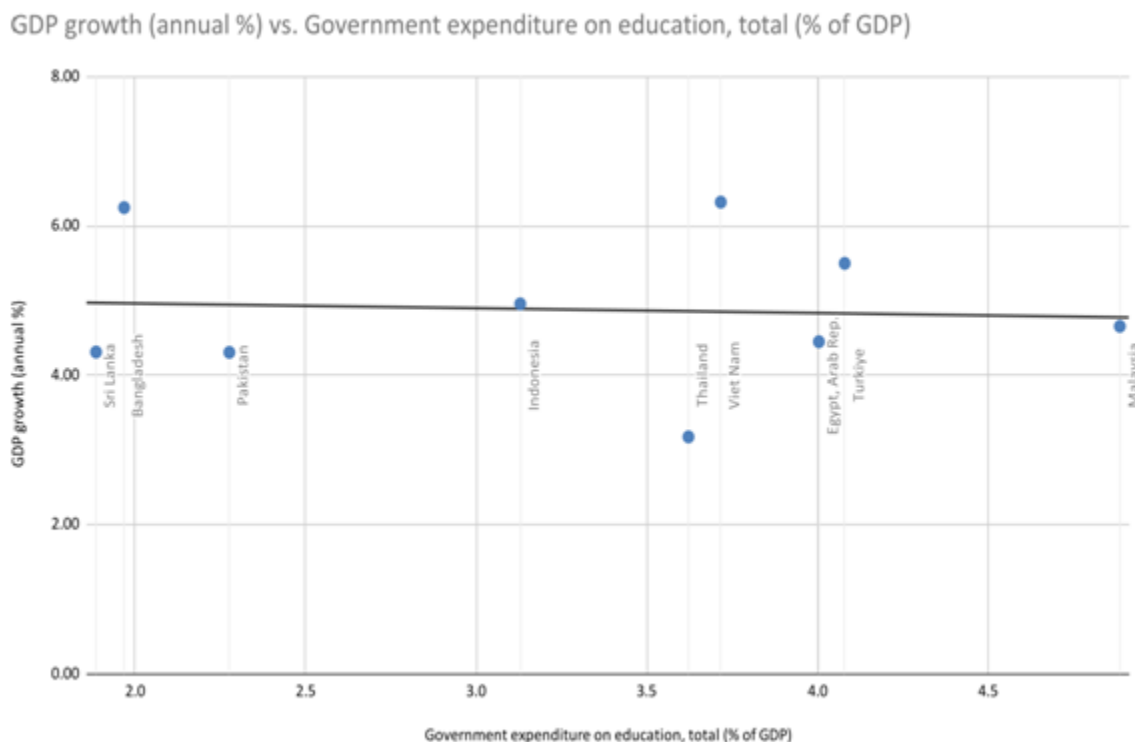
GDP growth (annual %) vs. Government expenditure on education, total (% of GDP)



Note: In this graph Government expenditure on education, total (% of GDP) is on the X-axis, and GDP growth (annual %) is on the Y-axis. Source: Database World Development Indicators.

Figure 2 differs from Figure 1 as it shows government expenditure on education and annual GDP growth averaged across 20 years. However, similar to the last graph, figure 2 shows that there is no real pattern. Bangladesh continues to defy the expected pattern, having the second-highest average GDP growth over the last 20 years despite having the second-lowest government expenditure on education. However, it can also be noted that countries with a higher percentage of government expenditure on education based on their GDP such as Indonesia, Vietnam, Turkey and more have a higher average GDP growth than countries with a lower average percentage spent on education such as Pakistan and Sri Lanka. But, as there is no clear trend, we cannot assume that higher government expenditure on education, as a percentage of GDP, leads to greater economic growth.

**Figure 2: Average Education Spending and GDP growth Across 20 years**

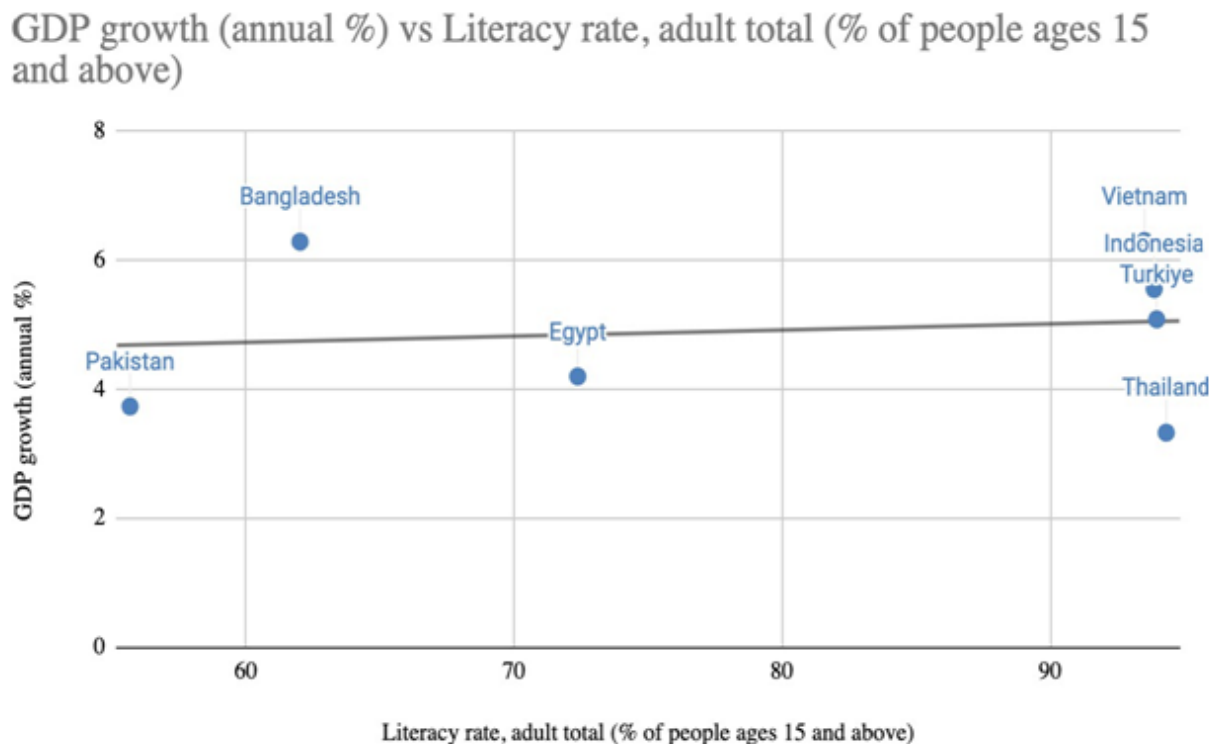


Note: In this graph Government expenditure on education, total (% of GDP) has been averaged across 2003-2022 and is on the X-axis, and GDP growth (annual %) has also been averaged across 2003-2022 and is on the Y-axis.

Though my analysis of the previous figures suggests a weak or inconclusive correlation between total government expenditure and annual GDP growth, I observe a stronger correlation between literacy rates and economic performance. This is shown by the positive trendline that can be seen in Figure 3. Countries with higher literacy rates, Vietnam, Indonesia, and Turkiye, with Thailand being the only exception, have all seen annual GDP growth above the trendline and a relatively higher level than both Pakistan and Egypt, two countries with relatively low literacy rates. This shows that simply increasing expenditure may not directly translate to economic growth, but that strategic investments in education that demonstrably improve learning outcomes likely hold the key. Bangladesh serves as, yet again, a fascinating outlier. It might be the case that Bangladesh's education system might be tailoring its students to job-specific skills instead of literacy goals.

According to the Scholaro database, the Bangladesh curriculum often emphasizes vocational training and different pathways for students to specialize in to gain skills valuable in the job market. These resources may be spent on training job seekers to perform labor-intensive tasks rather than passing a literacy test. This ultimately causes the literacy rate to be lower but the economic growth to be high due to increased labor productivity and specialization in manufacturing.

**Figure 3: Literacy Rate VS GDP Growth**



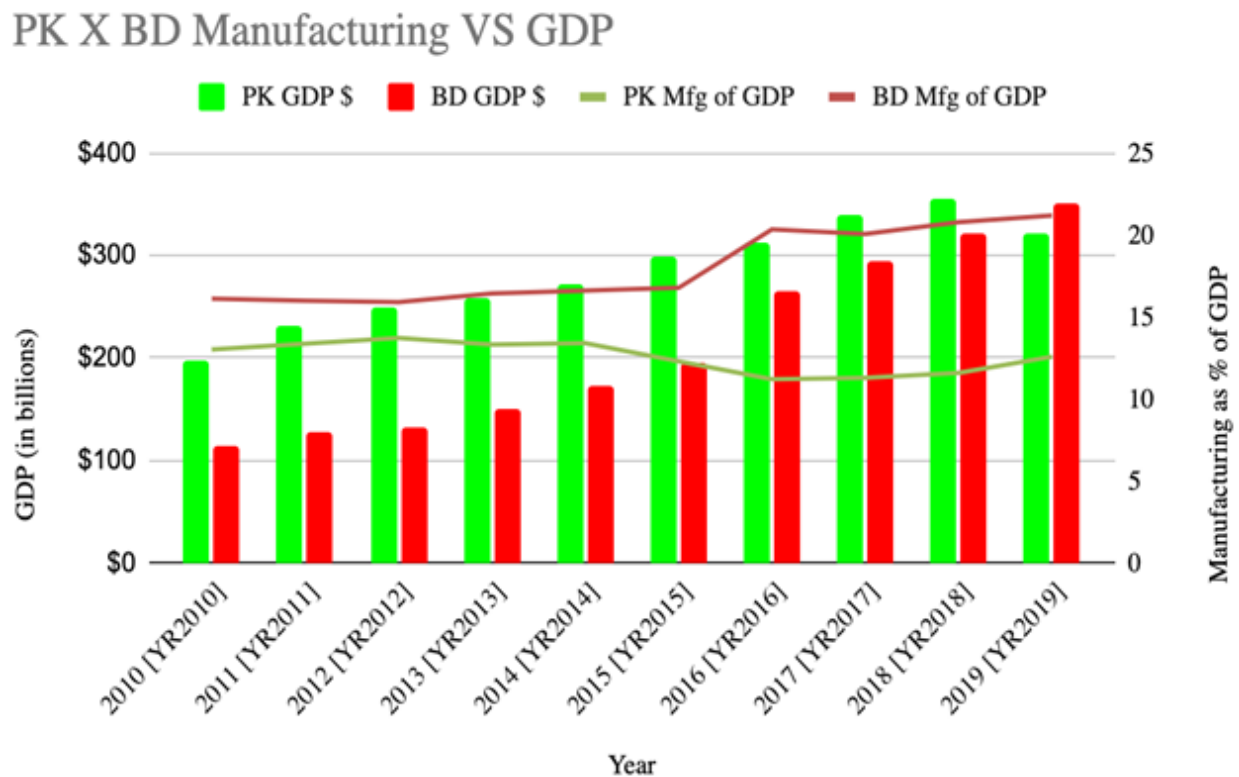
### 3.2. Sectoral shifts

#### 3.2.1. Manufacturing

Manufacturing has played a large role in the reason for Bangladesh’s economic success. As Bangladesh’s manufacturing value-added (% of GDP) increases, its GDP level does too.

Pakistan's manufacturing value-added (% of GDP) stayed relatively the same across the 9 years which may explain why its GDP level did not increase as much as Bangladesh’s increase. The difference in the manufacturing value added (% of GDP) between Bangladesh and Pakistan also widened between 2015 and 2019 which has resulted in Bangladesh surpassing the GDP level of Pakistan. Further, Pakistan's manufacturing value began to decrease from 2014 to 2019 which caused its GDP level to not rise by much and begin to decrease in 2019. From this graph, we can see how big a role manufacturing plays in a country’s GDP and thus economic growth.

**Figure 4: Manufacturing as % of GDP and GDP level from 2011-2019 for Pakistan and Bangladesh**



Note: Years 2011 to 2019 on the X-axis. GDP (in billions) on the left vertical axis. Manufacturing as % of GDP on the right axis.

### 3.2.2. Foreign Direct Investment

There is no clear relationship between Foreign direct investment and GDP growth leaving us to believe that foreign direct investment is not a major factor in Bangladesh’s success. Though you would expect there to be some correlation between FDI and GDP growth, this graph proves the contrary. FDI provides a capital inflow for businesses which can lead to production and economic activity. Furthermore, technology can be transferred, and already set practices can be made more efficient which may ultimately boost the economy. A hypothesis as to why we see no clear relationship could be due to a higher emphasis on domestic innovation and investment which can be shown through Bangladesh's increase in local manufacturing as shown in Figure 4.

**Figure 5: GDP growth (annual %) and Foreign direct investment, net inflows (% of GDP) for Bangladesh**



Note: Year on X-axis. Annual GDP growth as a % on the left vertical axis. Foreign direct investment, net inflows as % of GDP on the right vertical axis.

### 3.2.3. Agriculture

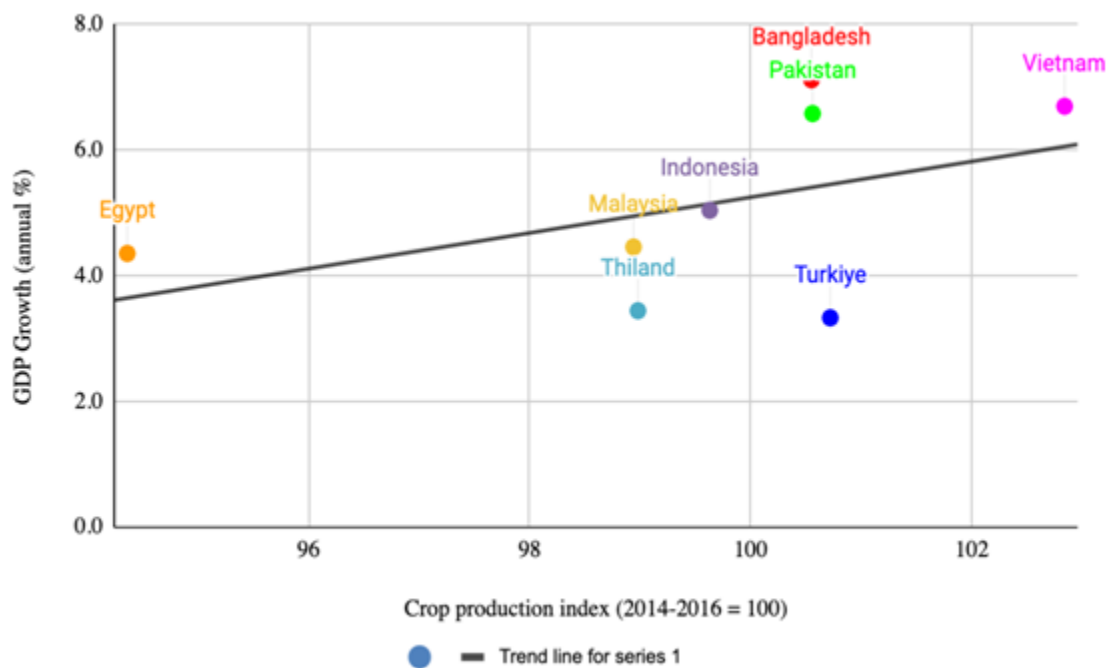
Agriculture has also played a large role in Bangladesh’s economic success. As shown by the graph, countries with a higher level of crop production index generally have a higher level of GDP growth in the same year. Countries such as Vietnam, Pakistan, and Bangladesh all have high levels of crop production index which has resulted in their growth in GDP. However, it can



also be noted that Türkiye has a high value on the crop production index but has relatively low GDP growth in the same year. This could be due to other factors in play. As reinforced by Dani Rodrick and Joseph Stiglitz in their paper “A New Growth Strategy for Developing Nations”, agriculture is seen to play a valuable role in the growth of developing nations, and especially an increase in agricultural productivity will play a role in the growth of a country (Rodrick and Stiglitz 2024). Furthermore, this acceleration in Bangladesh could also amount to an increase in productivity in agriculture which was also the case in Africa which was seen in the paper “Africa’s Manufacturing Puzzle: Evidence from Tanzanian and Ethiopian Firms” (Diao, et al 2021).

Though agriculture has a role in the growth of Bangladesh’s economy, it may not be the main reason for their growth as Bangladesh is way above the trend line. As shown in Figure 6, Bangladesh is clearly performing above the trend line thus showcasing that there are a multitude of other factors in play nonetheless agriculture is still a factor in its growth but may not be its driving factor.

**Figure 6: Agriculture (crop production index and employment in agriculture) and GDP growth in 2016**

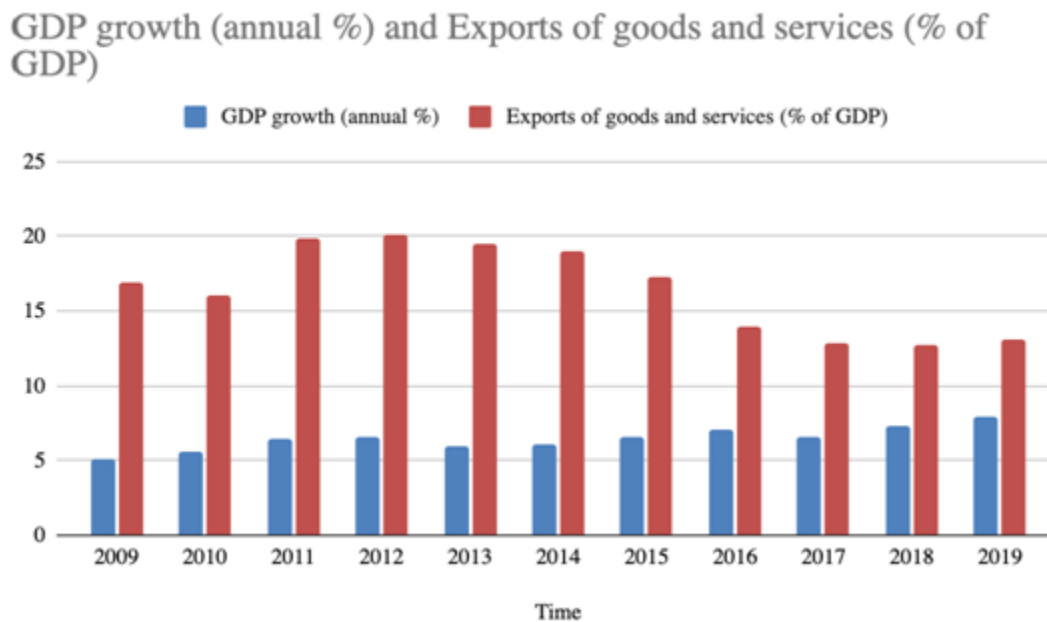


Note: Crop production index ( 2014-2016=100) on the X-axis with GDP growth (annual %) on the Y-axis.

### 3.2.4. Exports, and Imports

There is no clear relationship between the export of goods and services as % of GDP and the annual % of GDP growth. Exports are a major factor in GDP growth but it is not the case for Bangladesh. One explanation for this result may be that exports are actually increasing but at a slower rate than GDP growth suggesting that it may be a factor in Bangladesh’s growth but not the driving one. Another explanation could be due to low-value exports. Bangladesh is notorious for its garment industry, however, it may generate lower profits and may not create a significant spillover effect into other sectors.

**Figure 7: GDP growth (annual %) and Exports of goods and services (% of GDP) for Bangladesh over ten years**



Note: Time in years on the X-axis with GDP growth (annual %) and Exports of goods and services (% of GDP) on the Y-axis.

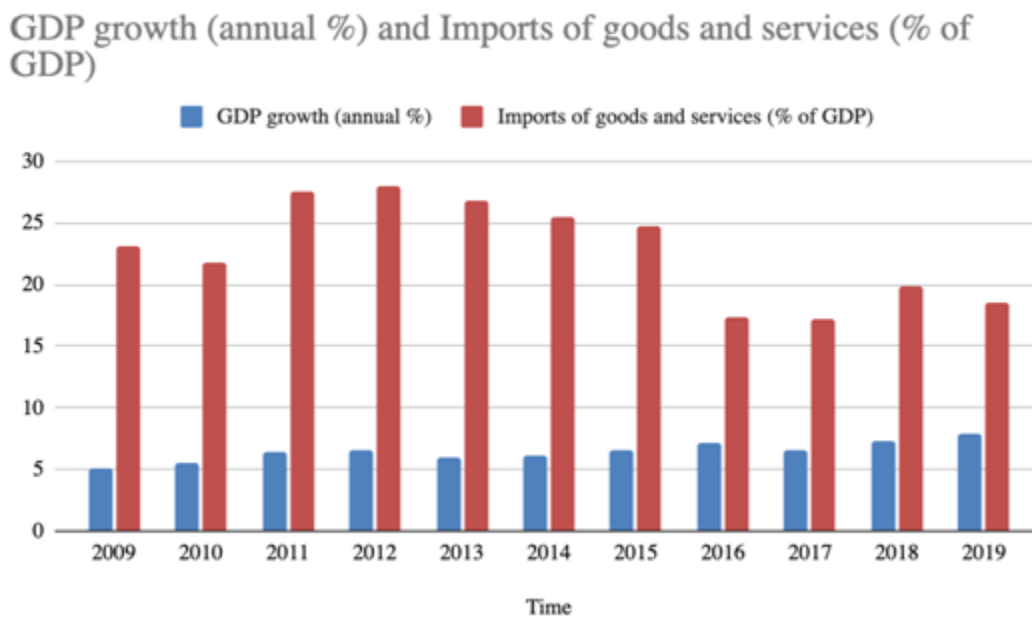
There is somewhat of a correlation between imports of goods and services and GDP growth but it can be said with certainty that it is a reason for the rapid growth in Bangladesh’s economy.

Figure 8 points out how in the long run, a decrease in imports as a percentage of GDP had led to an increase in annual GDP growth. However, this is not always the case in the graph as GDP growth actually increased between the years 2011 and 2012 and also between 2017 and 2018.

This opposes economic theory and shows yet again that another factor is at hand which is

essentially greater than the negative of imports such as a decrease in GDP. The goods and services being imported must also be taken into account as most goods imported can be intermediate goods or capital equipment which are used in the stages of production and can actually promote economic growth as production and productivity increase.

**Figure 8: GDP growth (annual %) and Imports of goods and services (% of GDP) for Bangladesh over ten years**



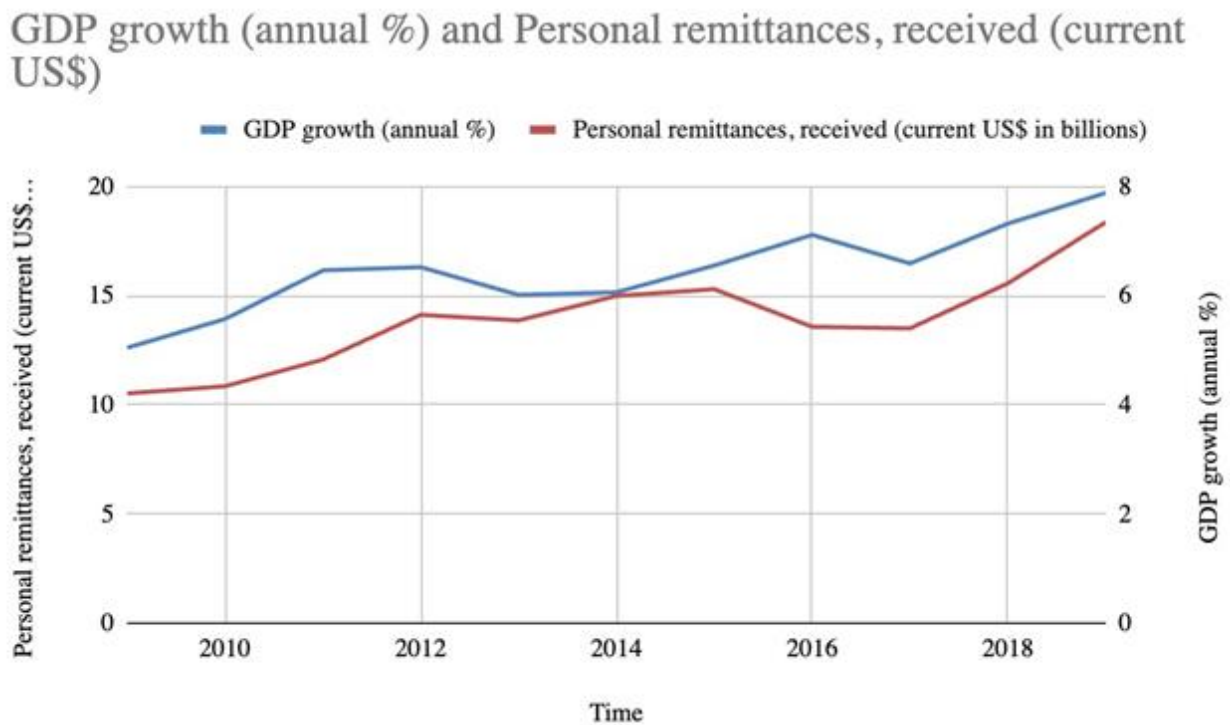
Note: Time in years on the X-axis with GDP growth (annual %) and Imports of goods and services (% of GDP) on the Y-axis.

### 3.3. Consumption

The influx of personal remittances has demonstrably contributed to Bangladesh's recent economic upsurge. The mostly positive correlation between GDP growth and remittances, as shown in Figure 9, signifies the likely importance remittances have on Bangladesh's economy. Tying this in with the economic equation  $GDP = C + I + G + X_m$ , remittances have likely played a large role in increasing consumption in the economy and thus GDP. Remittances directly inject new money into the country's economy. This inflow of foreign currency translates into increased disposable incomes for households in Bangladesh. This increase in disposable income can lead to an increase in consumption by consumers. Thus, aggregate demand also experiences a demonstrable upward trajectory. This heightened demand can be a potential stimulus for business investment as it incentivizes domestic businesses to expand and increase production to

meet the rising demand. This production expansion necessitates additional labor inputs, ultimately leading to increased employment opportunities and economic growth in the country. In conclusion, personal remittances from Bangladeshi migrant workers serve as a notable driver in the nation's recent economic prosperity. The substantial inflow of foreign currency not only fuels domestic consumption but also increases investment and alleviates poverty, leading to an increase in economic prosperity and GDP.

**Figure 9: GDP growth (annual %) and Personal remittances, received (current US\$) over ten years**



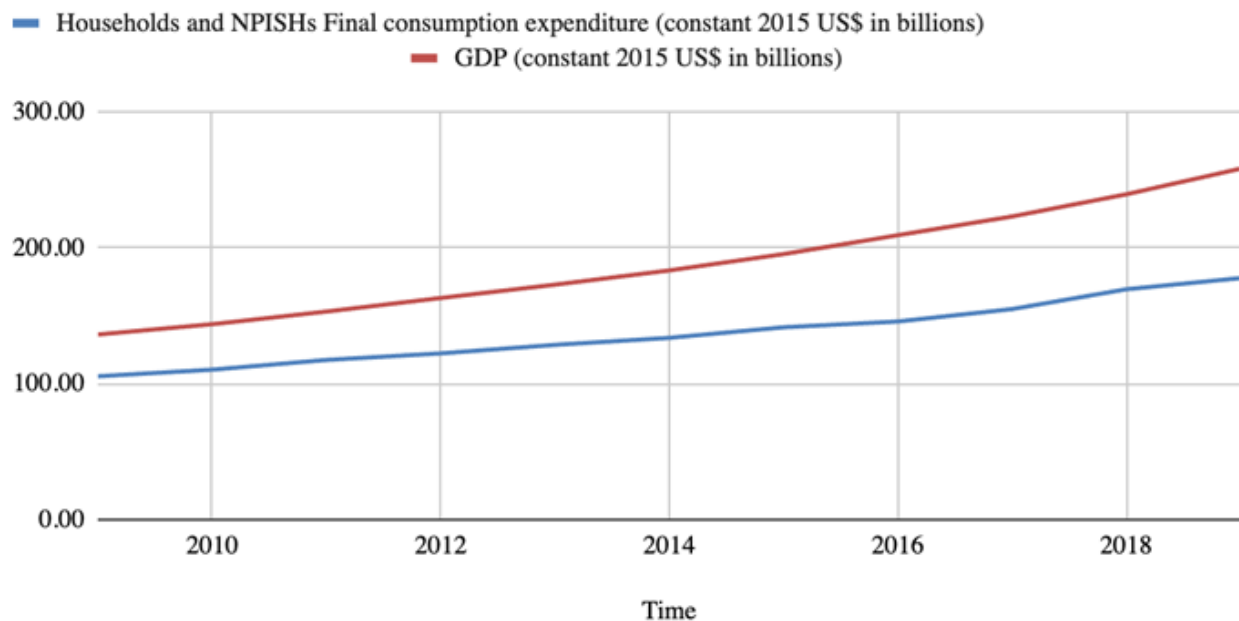
Note: Time in years on the X-axis with Personal remittances, received (current US\$) on the left vertical axis and GDP growth (annual %) on the right vertical axis).

Bangladesh's rising Households and NPISHs Final Consumption Expenditure (constant 2015 US\$) along with its increasing GDP (constant 2015 US\$) during the period 2009-2019 provides compelling evidence for the country's economic prosperity. This trend, shown in Figure 10, highlights the increasing disposable income Bangladeshi households are experiencing signifying a general rise in the standard of living for citizens. As explained previously, an increase in general consumption directly translates to demand for goods and services produced within the economy. This incentivizes firms to increase production, and invest in expansion, which directly

results in economic growth and job creation furthering consumption in the country. Moreover, an increase in disposable income also means an increase in tax revenue by the government, which can then be used to further stimulate the economy. This factor is not just a result of economic growth but also a driver. Increased household spending creates a positive feedback loop that ultimately raises Bangladesh’s GDP.

**Figure 10: Households and NPISHs Final consumption expenditure (constant 2015 US\$ in billions) and GDP (constant 2015 US\$ in billions)**

Households and NPISHs Final consumption expenditure (constant 2015 US\$ in billions) and GDP (constant 2015 US\$ in billions)



Note: Time in years on the X-axis with Households and NPISHs Final consumption expenditure (constant 2015 US\$ in billions) and GDP (constant 2015 US\$ in billions) on the Y-axis.

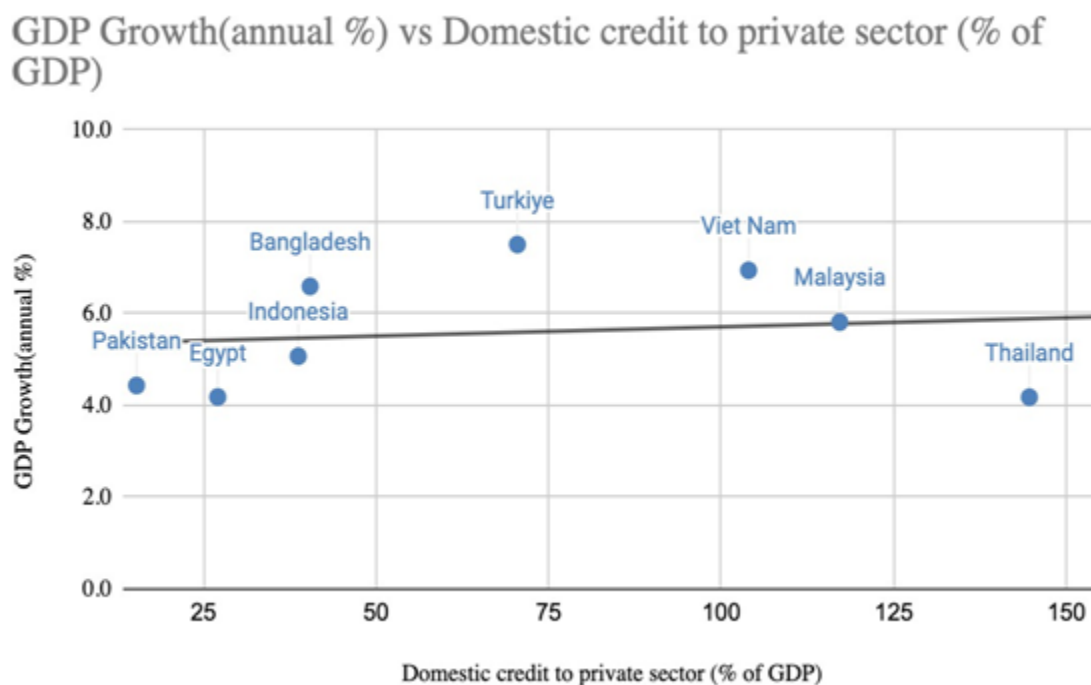
### 3.4. Investment

While a weak positive correlation exists between Domestic Credit to Private Sector (% of GDP) and GDP Growth (%) in 2017, Bangladesh exhibited a higher growth rate than predicted by this trend, suggesting additional factors influencing its economic performance. The lack of a clear relationship between the variables shown in Figure 11 implies that while there may be some correlation between domestic credit to private sector<sup>2</sup> and GDP growth, again Bangladesh seems

<sup>2</sup> domestic credit to private sector is defined as financial resources provided to the private sector by financial

to defy the expected pattern, indicating that other factors are in play. Despite this, another possibility as to why Bangladesh seems to outperform is that it may be more efficient in translating available credit into productive investments. Factors like better loan targeting and effective financial regulations explain why Bangladesh might be achieving a higher return on investment from its available credit pool.

**Figure 11: GDP Growth (annual %) and Domestic Credit to private sector (% of GDP) in 2017**



Note: Domestic credit to private sector (% of GDP) is on the X-axis while GDP growth (annual %) is on the Y-axis.

**4. Discussions**

Drawing insights from Bangladesh's impressive economic growth, fueled by a strong manufacturing sector, a productive agricultural industry, and significant inflows of remittances, this analysis explores two solutions that hold potential for developing countries seeking to replicate this success story.

One policy that I would recommend for other developing countries is fostering a competitive

corporations

manufacturing sector. Through the use of tax breaks, subsidies, and foreign trade restrictions, the government can encourage domestic investment in manufacturing to stimulate the economy.

Developing nations should use targeted incentives toward specific high-growth industries or those aligned with national development goals. Performance-based incentives can also be used to foster competitiveness and efficiency. Additionally, investing in infrastructure is crucial for developing nations to promote manufacturing and decrease operational costs. Furthermore, the investment in infrastructure can also attract foreign direct investment further helping the nation's economy. Though this is a costly investment and often requires several years to see its true value, this, in my opinion, is a must for developing nations. Lastly, governments must be careful in their protectionist policies. They should develop a well-designed strategy that encourages domestic investment while still allowing healthy competition from foreign companies to truly see economic prosperity. With these policies being successfully implemented, developing nations will likely experience job creation, technological advancements, increased exports, and reduced reliance on imports which all result in economic prosperity.

Secondly, another policy that can be implemented is improving the quality of education. As seen in this paper, Bangladesh spends less on education compared to the other set of countries, yet it is more effective because it emphasizes skill-based learning rather than rote memorization. Though my analysis shows no relationship between educational spending and GDP growth, part of the reason for this may be spending on quantity rather than quality of education. The analysis between literacy rate and GDP growth shows that boosting true measures of education has real returns. Investing in teacher training, curriculum development, and early education can be used to raise useful skills and can be a beneficial policy for developing nations. Offering skill-based learning fosters critical thinking, problem-solving, and collaboration making students highly valuable in the job market. The problem that some developing countries face is that schools are there but the students are not. Early childhood education should be incentivized and there should be some degree of government intervention such as discounted school fees, tax breaks, or other benefits for families which would encourage families to send their kids to school. In addition, by providing appropriate training for teachers, educators will now have the skills and labor to deliver effective instruction aligned with this new approach to learning. Investing in education is not a quick fix but rather a long-term investment with the potential to unlock a country's human capital and steer the country toward long-term sustainable economic growth.

## **5. Conclusion**

This paper analyzed data from the World Bank and found that manufacturing, agriculture, and personal remittances are the key reasons for Bangladesh's recent rapid growth. Other factors like education, net exports, investment, and foreign direct investment are not discredited, but, in this

case, don't show clear evidence pointing to them contributing to the country's economic growth. Furthermore, based on this research, I have proposed two policies that other similar developing nations can adopt. One is cultivating a more competitive manufacturing sector with the help of domestic investment and the second is improving the quality rather than quantity of education to utilize the human capital in the country fully.

This research has identified a correlation between multiple variables. While this finding provides valuable insights, future studies should use more rigorous methods that allow establishing causation. Establishing causation has significant benefits for future research. Firstly, it allows researchers to move beyond simply describing relationships to understanding the underlying mechanisms at play. This knowledge can then be used to develop more effective interventions and strategies. Secondly, understanding causal relationships allows researchers to make more accurate predictions about future trends and recommendations to policymakers on effective strategies to reduce global poverty.

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